

5. An image processing apparatus for recording a plurality of sensed images on a recording medium, and playing back and displaying the images, comprising:
image sensing means for sensing an image;
- 5 recording/playback means for recording and playing back the image sensed by said image sensing means; and
display means for playing back and displaying an image

display means comprises a plurality of display layout
10 modes for displaying the current image sensing signal, and a signal obtained by playing back the image sensed at least before the current image with partial boundary regions thereof overlapping each other.

6. The apparatus according to claim 5, wherein the
15 image is a still image and/or a moving image.

7. The apparatus according to claim 5, wherein the plurality of display layout modes of said display means include a first display layout mode in which the images are laid out in two directions, and a second display
20 layout mode in which the images are laid out in one direction.

8. The apparatus according to claim 7, wherein in the second display layout mode, the images are laid out horizontally and/or vertically.

9. The method according to claim 1, further comprising a function of reversing the layout direction in the one direction.

10. The apparatus according to claim 5, further comprising a function of reversing the layout direction in the one direction.

11. The method according to claim 1, wherein the

out and displaying the current image sensing signal, and
10 a signal obtained by playing back the image sensed at least before the current image in two directions with partial boundary regions thereof overlapping each other, and includes the selection step of selecting an arbitrary one of display regions laid out in the display
15 layout mode.

12. The apparatus according to claim 5, wherein said display means comprises a display layout mode for laying out and displaying the current image sensing signal, and a signal obtained by playing back the image sensed at
20 least before the current image in two directions with partial boundary regions thereof overlapping each other, and includes selection means for selecting an arbitrary one of display regions laid out in the display layout mode.

25 13. A storage medium which stores a control program for controlling an image processing apparatus for

recording a plurality of sensed images on a recording medium, and playing back and displaying the images, said control program having control modules of the steps of: sensing an image; recording and playing back the sensed
5 image; playing back and displaying an image sensed at least before a current image; and controlling to execute a plurality of display layout modes for displaying the

playing back the image sensed at least before the
10 current image with partial boundary regions thereof overlapping each other.

14. The medium according to claim 13, wherein the image is a still image and/or a moving image.

15 15. The medium according to claim 13, wherein said program further has a control module of the step of controlling to execute a function of reversing the layout direction in the one direction.

16. The medium according to claim 13, wherein said control program further has a control module of the step
20 of controlling to select an arbitrary one of display regions laid out in a display layout mode for laying out and displaying the current image sensing signal, and a signal obtained by playing back the image sensed at least before the current image in two directions with
25 partial boundary regions thereof overlapping each other.

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A1 17. An image processing apparatus having a function of
(storing a plurality of sensed still images and/or moving
images in storage means, comprising:

image sensing means comprising an image sensing
5 lens which can change an optical system condition;

storage means for storing a plurality of images
sensed by said image sensing means in association with

each other

optical system condition change instruction means
10 for outputting an instruction for changing the optical
system condition of said image sensing lens; and

control means for controlling to generate an alert
and/or inhibit the optical system condition of said
image sensing lens from changing upon reception of the
15 instruction for changing the optical system condition of
said image sensing lens from said optical system
condition change instruction means after a first one of
the plurality of images to be stored in said storage
means in association with each other is sensed and
20 stored.

20 stored.

18. The apparatus according to claim 17, wherein the optical system condition is a focal length of said image sensing lens.

19. The apparatus according to claim 17, wherein
25 associating the plurality of images is obtaining a
panoramic image by synthesizing the plurality of images.

20. The apparatus according to claim 17, wherein the plurality of images are images sensed by performing pixel shift, and associating the plurality of images is obtaining a high-resolution image by synthesizing the plurality of images sensed by performing the pixel shift.

21. An image processing apparatus having a function of storing a plurality of sensed still images and/or moving

images in storage means, comprising:

image sensing means comprising an image sensing
10 lens which can change an optical system condition;
storage means for storing a plurality of images sensed by said image sensing means in association with each other;
optical system condition change instruction means
15 for outputting an instruction for changing the optical system condition of said image sensing lens; and
control means for controlling to start image sensing of a plurality of new images to be stored in association with each other upon reception of the
20 instruction for changing the optical system condition of said image sensing lens from said optical system condition change instruction means after a first one of the plurality of images to be stored in said storage means in association with each other is sensed and
25 stored.

22. The apparatus according to claim 21, wherein the optical system condition is a focal length of said image sensing lens.

23. The apparatus according to claim 21, wherein
5 associating the plurality of images is obtaining a panoramic image by synthesizing the plurality of images.

24. The apparatus according to claim 21, wherein the

~~plurality of images are images sensed by performing~~
pixel shift, and associating the plurality of images is
10 obtaining a high-resolution image by synthesizing the plurality of images sensed by performing the pixel shift.

25. The apparatus according to claim 17, wherein said control means controls to start image sensing of a plurality of new images to be stored in association with
15 each other after the alert is generated.

26. An image processing apparatus having a function of storing a plurality of sensed still images and/or moving images in storage means, comprising:

image sensing means comprising an image sensing
20 lens which can change an optical system condition;

storage means for storing a plurality of images sensed by said image sensing means in association with each other;

optical system condition change instruction means
25 for outputting an instruction for changing the optical system condition of said image sensing lens; and

46. The medium according to claim 45, wherein the optical system condition is a focal length of said image sensing lens.

47. The medium according to claim 45, wherein
5 associating the plurality of images is obtaining a
panoramic image by synthesizing the plurality of images.

48. The medium according to claim 45, wherein the plurality of ...

10 pixel shift, and associating the plurality of images is
obtaining a high-resolution image by synthesizing the
plurality of images sensed by performing the pixel shift.

49. A storage medium that stores a control program for controlling an image processing apparatus which comprises image sensing means comprising an image sensing lens which can change an optical system condition, storage means for storing a plurality of images sensed by said image sensing means in association with each other, and optical system condition change instruction means for outputting an instruction for changing the optical system condition of said image sensing lens, said control program comprising a code of the step of:

starting image sensing of a plurality of new
images to be stored in association with each other upon
25 reception of the instruction for changing the optical
system condition of said image sensing lens from said

optical system condition change instruction means after a first one of the plurality of images to be stored in said storage means in association with each other is sensed and stored.

5 50. The medium according to claim 49, wherein the optical system condition is a focal length of said image sensing lens.

51. The medium adjacent to

10 associating the plurality of images is obtaining a
panoramic image by synthesizing the plurality of images.

52. The medium according to claim 49, wherein the plurality of images are images sensed by performing pixel shift, and associating the plurality of images is obtaining a high-resolution image by synthesizing the plurality of images sensed by performing the pixel shift.

53. The medium according to claim 45, wherein said control program further comprises a code of the step of starting image sensing of a plurality of new images to be stored in association with each other after the alert is generated.

54. A storage medium that stores a control program for
controlling an image processing apparatus which
comprises image sensing means comprising an image
sensing lens which can change an optical system
condition, storage means for storing a plurality of
images sensed by said image sensing means in association

with each other, and optical system condition change
instruction means for outputting an instruction for
changing the optical system condition of said image
sensing lens, said control program comprising a code of
the step of:

setting the optical system condition of said image sensing lens at an initial value before sensing of a first one of the pluralities of

10 said storage means in association with each other is started.

55. The medium according to claim 54, wherein the optical system condition is a focal length of said image sensing lens.

56. The medium according to claim 55, wherein the
15 initial value is a focal length on a wide-angle end of
said image sensing lens.

57. The medium according to claim 54, wherein associating the plurality of images is obtaining a panoramic image by synthesizing the plurality of images.

58. The medium according to claim 54, wherein the plurality of images are images sensed by performing pixel shift, and associating the plurality of images is obtaining a high-resolution image by synthesizing the plurality of images sensed by performing the pixel shift.

25 59. The apparatus according to any one of claims 17,
21 and 26, wherein the change in optical system

condition includes free attachment/detachment of said lens unit.

60. An image processing apparatus having a function of storing a plurality of sensed still images and/or moving
5 images in storage means, comprising:

a detachable lens unit having nonvolatile storage means;

formed by said lens unit;
10 instruction means for instructing attachment/detachment of said lens unit; and
control means for controlling to permit detachment of said lens unit after information pertaining to an operation state of said lens unit and/or user
15 information are/is stored in said nonvolatile storage means, when said instruction means outputs an instruction for detaching said lens unit, and for reading out information pertaining to a use state of said lens unit and/or the user information stored in
20 said nonvolatile storage means and re-setting an operation state of said image processing apparatus in accordance with the readout information, when said lens unit is attached again.

61. The apparatus according to claim 60, wherein the
25 operation state is an image sensing mode of said image processing apparatus.

66. A storage medium that stores a control program for
controlling an image processing apparatus which
comprises a detachable lens unit having nonvolatile
storage means, image sensing means for sensing an object
5 image formed by said lens unit, and instruction means
for instructing attachment/detachment of said lens unit,
said control program comprising a code of the step of:

information pertaining to an operation state of said
10 lens unit and/or user information are/is stored in said
nonvolatile storage means, when said instruction means
outputs an instruction for detaching said lens unit, and
reading out information pertaining to a use state of
said lens unit and/or the user information stored in
15 said nonvolatile storage means and re-setting an
operation state of said image processing apparatus in
accordance with the readout information, when said lens
unit is attached again.

67. The medium according to claim 66, wherein the
20 operation state is an image sensing mode of said image
processing apparatus.

68. The medium according to claim 66, wherein the
operation state is a focal length setting value of a
lens unit, a focal length of which can be changed.

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